



AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A method of producing semiconductor devices, comprising the steps of:
 - forming an etching resistive mask over a semiconductor substrate;
 - etching said semiconductor substrate through an opening in said etching resistive mask to form a device isolation trench;
 - forming a silicon oxide layer over the etching resistive mask and the semiconductor substrate having said device isolation trench formed therein;
 - forming a coat of silazane perhydride polymer solution over the silicon oxide layer;
 - vaporizing a solvent from said coat and then subjecting said coat to chemical reaction to form a silicon oxide film;
 - removing said film, except for residue of silicon oxide remaining inside said device isolation trench, by performing a chemical mechanical polishing (CMP) process;
 - and
 - after removing said film, heating said residue to remove impurities for densification.

2. (Currently amended) The method according to claim 1, wherein said etching resistive mask is formed so as to contain a film of silicon nitride, further comprising the step of:

forming ~~[[a]]~~ the film of silicon oxide over the surface of said silicon nitride after formation of said device isolation trench and before forming said coat of said silazane perhydride polymer solution.

3. (Currently amended) The method according to claim 1, wherein said etching resistive mask is formed so as to contain a film of silicon nitride, further comprising the step of:

forming ~~[[a]]~~ the film of silicon oxide over the surface of said silicon nitride after formation of said device isolation trench, before forming said coat of said silazane perhydride polymer solution and after etching said silicon nitride to etch back opening edges.

4. (Original) The method according to claim 2 or 3, wherein said step of forming said silicon oxide over the surface of said silicon nitride includes either one of radical oxidation, low pressure CVD and plasma CVD.

5. (Canceled)